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COVID-19 Affects Coping Strategies and Food Access for Maine Adults

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Introduction

The COVID-19 pandemic was declared in March 2020, greatly impacting the ways in which consumers engage with and have access to food systems.¹ Domestic and international food systems and supply chains were disrupted, lockdown and mobility restrictions were imposed by national/state governments, and consequent job disruptions and job loss led to reduced income in some households. This led to reduced purchasing power for some, and subsequently higher rates of household food insecurity.^{1,2} Household food security is defined as access by all members at all times to safe, sufficient, and nutritious foods needed for an active, healthy life.³

Food security encompasses four traditional dimensions: food availability, food accessibility, food utilization, and stability.⁴ When a minimum food requirement is not achieved, members of a household may turn to coping strategies to acquire, access, or make available acceptable foods, attempt to maintain food utilization for a healthy nutritional status, and secure stability of food as well as meet the other three dimensions of food security. It is important to note that for food-security objectives to be realized, all four dimensions of food security must be fulfilled simultaneously.⁴

Food-coping strategies (FCS) are often measured as direct indicators of food insecurity, as they allow for an assessment of the vulnerability and sustainability of attempts to maintain a sufficient food supply by limited-resource individuals.⁵ They are often easier to assess than other household indicators of sufficiency, including income and food consumption.⁶ Because vulnerability is considered, food-security policies and programs that account for FCS can broaden their efforts from addressing current constraints to food consumption, to include actions that also address future threats to food security.⁴

Households may employ any one or a combination of the four types of coping strategies, depending on the severity and duration (chronic or temporary) of food insecurity experienced by that household.⁷

The four types of coping strategies include:

- Diet change: switching from preferred foods to cheaper, less preferred substitutes;
- Borrowing food or money to buy food: increasing food supply using short-term strategies that are not sustainable over a longer period;
- Reducing household food needs: sending household members elsewhere for meals (e.g. sending children to a friend's house for dinner);
- Food rationing: cutting portion sizes or the number of meals, favoring certain household members over others, skipping days without eating.⁷

Differences in FCS have been identified between newly food-insecure households versus households that experience persistent food insecurity.⁸ Duration, frequency, and severity have been shown to influence FCS. Understanding how these dynamics influence the nature, extent, and urgency of individuals' need for assistance is key to tailoring interventions.⁴ For example, Anater et al.⁹ found that frequency of FCS used was inversely proportional to level of risk, in that those who were less overtly risky and seemingly required a lower level of desperation were reported with a greater frequency. Engaging in FCSs poses a variety of risks that warrant public health attention. Such risks can include financial, food safety, regulatory, nutritional, and physical risks to those employing the FCS, with some FCS posing multiple risks.⁹

Proactive strategies that address food insecurity during the COVID-19 crisis and beyond have the potential to reduce potential negative health outcomes associated with some FCS⁸ such as birth defects, anemia, lower nutrient intakes, cognitive problems, aggression, anxiety, depression, behavioral problems, asthma, poor oral health, and suicidal ideation in children; mental-health problems and depression, diabetes, hypertension, hyperlipidemia, poor sleep patterns, and poor oral health in non-senior adults; and poor health, mental-health problems and depression, and limitations in activities of daily living in senior adults.¹⁰ Monitoring FCS, food security status, and the incidence of hunger is of considerable interest and value to future policy and community program design.³ While recent studies have shown that disruptions associated with COVID-19 have driven increased food insecurity globally and in the United States, there is a lack of understanding about how the pandemic has affected use of FCS among U.S. households. Therefore, we sought to identify the commonly reported FCS through a survey of households in Maine, including FCS used before and after March 2020.

Methods

A survey (n = 618) was conducted in August/September 2020 to assess the effects of COVID-19 on food security in Maine. As part of this survey, FCS were assessed in two time periods: prior to the onset of the pandemic (March 11, 2020) and since the beginning of the pandemic. To participate in the survey, respondents needed to have lived in Maine for one year or longer, and be 18 years of age or older.

Results

Through this survey, we found that Maine people who experienced food insecurity before or since the beginning of COVID-19 expressed worry about food access during the pandemic regardless of age group, and reported using one or more pre-identified FCS. Reported FCS included:

- (1) participating in federal, state, local, or community-based assistance programs,
- (2) self-provisioning through gardening, fishing, hunting, or other activities, and
- (3) risky coping strategies such as purchasing damaged food, eating spoiled food, or eating pet food.

For the purpose of this brief, we present results describing concerns about food access and risky coping strategies, as these are less commonly discussed when addressing individual and household approaches to achieving food security.

Concern about food access

Respondents across age groups were concerned about the costs of food (expense) as well as the national supply. There were specific concerns that there would not be enough food in the stores because of the pandemic. Fewer respondents across all age groups were concerned about their personal household supply of food if they were not able to go out, but this is less of a concern than other issues. The 35-54 age group was the most concerned that they would not be able to get, or would lose access to, programs that provide food or money for

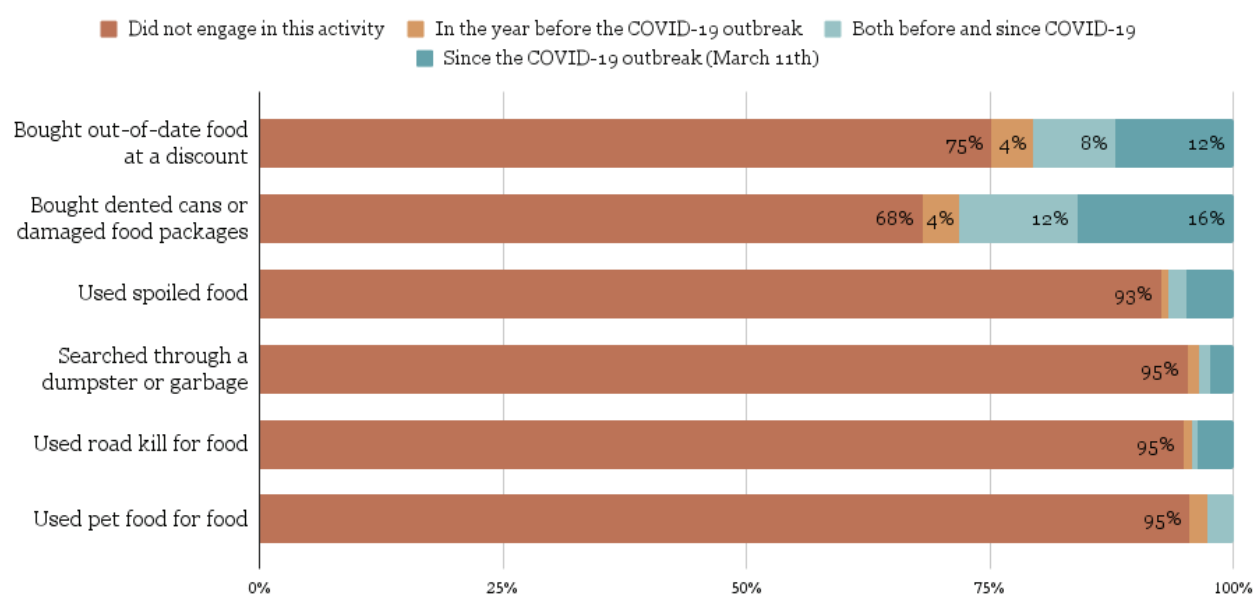


Figure 1. Percentage of survey respondents reporting risky FCS

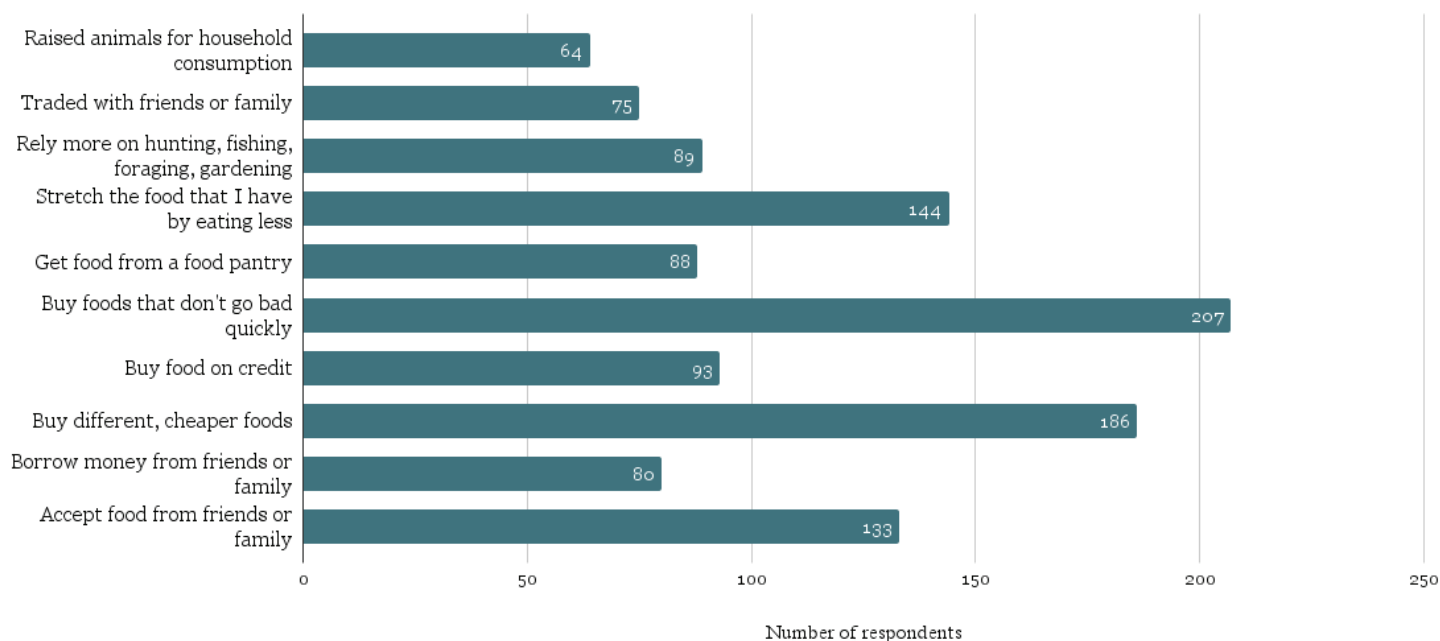


Figure 2. Respondents reporting FCS with reduced risks

food. The 55+ age group were more likely than other age groups to report that at least sometimes they had to stand too close to other people when getting food. All age groups reported difficulty finding the kinds of food their family preferred to eat, finding as much food as they wanted to buy, having to travel to more places than usual to find food their family wanted, and reducing the number of shopping trips.

Coping Strategies

Respondents in the 55+ age group were less likely to report using listed FCS than other age groups. The 35-54 age group respondents more frequently turned to hunting, fishing, gardening, and raising backyard animals for household consumption than the 55+ age group. The 18-34 age-group respondents were more likely to accept food from friends and family and borrow money from friends and family compared to those who were in the 35-54 and 55+ age groups. The coping strategies most commonly used by all age groups were purchasing foods with a longer shelf life and buying less expensive food or different foods than normally purchased items. There was a large increase in the percentage of respondents who reported using risky food-coping strategies since the beginning of the pandemic. The most frequently reported strategies included eating food that came from dented cans or damaged packaging and eating out-of-date food. Among young people, we observed a disturbing increase

in eating self-reported spoiled food since the beginning of the pandemic. Respondents in the 55+ age group are less likely to report risky food-coping strategies.

Discussion

Our data indicate that there was a substantial change in the way Mainers engage with and access our food systems following the onset of the pandemic. In addition, we found an increase in the number of people who reported utilizing a variety of FCS. Age was a factor in FCS use, and we found that participants utilized a combination of financial and FCS to obtain enough food for themselves and their families. The coping strategies most commonly reported by all age groups were not risky, such as purchasing foods with a longer shelf life and buying less expensive food or different foods than normally purchased items. However, we observed a large increase in the percentage of respondents who reported using risky food-coping strategies since the beginning of the pandemic, for example eating food that came from dented cans or damaged packaging and eating out-of-date food. Younger people in particular reported a disturbing increase in eating self-reported spoiled food since the beginning of the pandemic. These data indicate opportunities for more widespread education throughout the state of Maine about topics to improve food security, reduce food-safety risk, and minimize food waste.

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About NFACT

The National Food Access and COVID Research Team (NFACT) is a national collaboration of researchers committed to rigorous, comparative, and timely food access research during the time of COVID. We do this through collaborative, open access research that prioritizes communication to key decision-makers while building our scientific understanding of food system behaviors and policies. To learn more visit nfactresearch.org.



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